SOME WONDERS OF THE SKIES ABOVE

Mars Inhabited by a Race of Beings Superior to Us.

THE HUMAN BODY CLOSELY EXAMINED

It Is Made Up of a Mass of Crawling and Voracious Parasites--Results
of a Glauce Through the Electric
ladies present. "I don't believe I can
ever manage to drink water again." Eye, the Carious Instrument Invented by a Kingston Scientist.

Ion Wednesday, Oct. 22, 1894, The Tribne printed an article describing the views seen the Saturday evening previous by two of its editors through a peculiar instrument known as the "Electric Eye," the invention of Professor C. Coles, of Kingston. The paper read by Professor Coles last Monday morning at the Elm Park church before the Methodist Ministerial association having revived interest in that instrument and in the claims of its inventor. It is deemed timely to reprint in that instrument and in the claims of its inventor, it is deemed timely to reprint that description, which will probably be new to many of our readers. Before doing so it should be said that the original Eye has since been broken, and that Professor Coles has about three-fourths completed a new one, much larger in dimensions and fitted together with superior materials and precision of workmanship. He hopes to have this second instrument done within a few months and then promises far to Surpass the achievements of the first crude mechanism, some of which are explained below.] plained below.]

Fourteen years ago a young man was standing in an exposed house during a severe thunder storm. There came a blinding flash of lightning which entered through an open window, stunned the young man, crashed through a mantel into a fireplace on the opposite of the room and spent its force in the ground underneath. When the young man recovered his eye rested on a pecu-llar sight. Before the storm a china placque had stood, snow white, upon the mantel. Aftewards, its crystal surface was marked by an angular streat of black, as if a piece of charcoal had been drawn zig-zag-wise across the placque. An examination of the placque showed that this black mark was a literal portrait of the path described by a flash of lightning. It could not be erased. It was burned in the china, a

vivid memento of the dying storm.

This peculiar circumstance set the young man to thinking. He had always been of an inquiring turn of mind, but the mystery of that electric photograph puzzled him and he decided to master it. It took him fourteen years of pa-tient and incessant study to do so; of experimentation with crude tools and under great disadvantages; of steady, persistent and self-denying toil, often performed amidst the jeers of persons who lightly pronounced him an enthus-iast and a "crank." But the young man at last succeeded, and in doing so added new and far reaching fields of inquiry to the domain of modern sci-

THE INSTRUMENT EXHIBITED. That investigator was Professor C. Coles. The result of his inquiry is comprised in an instrument called the "Electric Eye," of which The Tribune. more than a year ago, printed a partial description. At the time of this former publication the professor had not per-fected his mysterious mechanism to the degree which he thought would warrant a public exhibition. He promised within a few weeks, to explain by actual demonstration much that seemed incredible. An attack of illness kept him from the redemption of his promise until last Saturday night, when a party of Scrantonians visited Kingston as the guests of Dr. D. B. Hand and as the guests of Dr. D. B. Hand and were accorded an evening's observation yet only a small percentage of those of the "Electric Eye," and through the of the "Electric Eye," and through the "Eye" a glimpse of Mars, then in unrivalled brilliancy in the Eastern

with doubt; they are the cold, uncol-ored facts of the matter, told in the accurate language of exact description. such as would pass as first class evi-dence in any court of law; and yet those who read this article will not be-

LIKE A MAGIC LANTERN.

The "Electric Eye," in the construc-tion of which Professor Coles passed the greater part of fourteen years, hav-ing often no better tools than a jackknife and a pair of pliers, in appearance resembles an ordinary stereopticon, doubled in size. It stands upon a box-like frame and is mounted on small casters. It has at one end a projecting nozzle into which has been inserted a box-like transpage of the serted a bowl-like, translucent china eye. At the opposite end there is a small aperture about the diameter of a half dollar, through which the beholder looks, in order to perceive the won-ders within. On the top of the case of the mechanism there is a small glass cap, an inch high and crowned with a small disc of brass, having an opening the size of the eye of a fine cambric which will enlarge the magnifying powneedle. Over this minute aperture, a needle. At various points if we time over." brass wire depends. At various points alongside the body of the box which forms the mechanism's main part, and also parallel to the forward nozzle, and connecting with the interior of the box at one end, and at the other end with the nozzle's outer terminus, similar wires stretch. In one side of the main box there is a crank like handle, which communicates with the "Eye's" inteor. This handle is like the handle to windlass, and by it the inventor, with evident exertion, gears the internal economy of his appliance up to the de-sired degree of wonder-workling activ-ity. At several points there are knobs and buttons which connect with the stored power of the "eye's" interior and assist in the regulation of its visual

POLLYWOGS AND LEECHES.

The first experiment of the evening consisted of an examination of ordinary rain water. Under the eaves of the professor's house stood a barrel partly full of drippings. One of the visitors fetched a tumberful, which to all appearances was as clear and as pure as the most crystalline spring water. A common pin was passed to half its length into this water. The pin was then lifted up and on its point held a small globule of water probably as large as a grain of fine table salt. This water was placed over the missis. water was placed over the minute aper-ture which was likened to the eye of a cambric needle, and not more than one-twentieth of the water reached the interior of the "Eye." An electric cir-cuit was then formed, the gearing crank was screwed up until from the ticking of a wheezy clock. Ten seconds later the room was partially darkened and the visitors were invit-ed to "take a look at the professor's namerica".

vivid light shone, of a peculiarly soft and yet distinct power. It resembled bottled sunlight, and that is what it was, according to the professor's state-ment. In the glow of this illumination ment. In the glow of this illumination the spectator beheld a globe of water easily two feet in diameter, partially filled with most beautiful vegetation, like moss and small shrubs. Swim-ming about, at perfect ease, in this exdreds of little micro-organisms, mag-nified so that some seemed as long and as large as the familiar tadpole and as large as the familiar tadpole and as large as the familiar tadpole of one's boyhood days. Several were even longer than this, approximating in size the ordinary leech. The great majority of these living, swimming beings were smaller than this, however, ply, "that your miscroscope is at one and looked like enlarged editions of telescope?" ings were smaller than this, however, and looked like enlarged editions of what boys call "wigglers" that inhabit rain water when it has stood for several days exposed to the sun's rays.

"The 'Eye' to-night," said Professor Coles, "is not working under full pres-

In the interior of the mechanism a

sure. I am saving its strength for the view we shall take of Mars. When the 'Eye' is placed under its maximum pressure it will magnify 140,000 diameters, and the micro-organisms, or animalculae, as I call them, which just now hooked like little pollywogs, will appear to be as large as ordinary brook trout. In fact it will be seen that every writely of the vator that we dripk is the first of the properties of the vator that we dripk is the properties of the vator that we dripk is the first of the firs particle of the water that we drink is fiterally inhabited, not only by one or two of these animalculae, but by my-riads of them, together with masses of vegetation which, as magnified in the 'Eye,' resemble the sea mosses and sea weed that a receding tide deposits on

"What will you drink?" inquired Pro-

fessor Coles. "Well, milk, or tea, or beer, I sup-

pose."
"Then," was the cheerful response. "you'll simply swallow the same kind of monsters in another form; and if you drink beer you'll swallow uglier ones and more of them than you've seen to-night. Why, the merost particle of beer, under the 'Eye,' discloses great masses of vegetation on which long, trans recallent looking worms. green, repellent looking worms and in-sects are creeping and feeding. Beer is about the worst stuff I know of, and milk is a pretty close second. But now, if you wish, I will show you what the human epidermis looks like."

PARASITES ON OUR BODIES. Upon the professor's request one of he ladies bared her forearm over the little aperture into which the rain water had been placed—the aperture had meanwhile been made perfectly dry— and rubbed her finger three or four times across the arm's surface. It should be said in the lady's behalt that she has always been a devout and consistent believer in the doctrine that cleanliness is next to godliness, and takes her daily bath as regularly as she says her daily prayer. To the ordinary eye, nothing dropped from her wrist as a result of this hasty abrasion, and several of the spectators were inclined to

treat the test as a joke.

But when the "Electric Eye" was turned on, and the lady was accorded the courtesy of a first glance at the minute fraction of herself which the professor assured his guests had got into the instrument's searching focus, she fairly shricked in amazement. Pictured against the intrument's back-ground were dozens of fan-like, trans-lucent scales, ranging in size from the flattened peeling of a goodly sized onion to the dimensions of a palm leaf fan. Great black streaks appeared on and around these scales, which at first were inert, but presently there were signs of life, and soon a little insect the size of a pinching bug scooted from one scale to another. He was followed by others, smaller and larger, until in the course of a few minutes the entire perspective became one mass of living, moving, clawing insects. One of these seemed as large as an ordinary house spider. Sev-eral resembled large roaches. Others seemed to be like the greenish, manylegged, saw-clawed worms that feed on maple, green tobacco or tomato leaves. They chased each other madly in and around these big scales of abraded epidermis, some climbing up over the scales and shaking them after the manner of crickets or pinching bugs, when clamboring over small, dried leaves. The big fellows seemed to be in pursuit of the smaller ones, and now and then one voracious rascal would gulp down an unfortunate youngster with the calm unconcern of a monster pickerel fish when he makes

a dainty morsel of a captured shiner. PARASITES EVERYWHERE. 'The particles of epidermis which look so large through this instrument." plained Professor Coles, "are in reality incomputably small. You couldn't see them as Mrs. W-- brushed them off; of her arm fell into the feed-hole of

of perfectly developed living organisms, as intelligent in proportion, as are the insects that we daily encounter among plants and ferns and shrubs. I am as sure as that I am standing here that the human body is literally made up of these parasites; that they constitute the motive power of our existence, so to speak, and that, if we could go far enough into this question, each one of these infinitesimal beings in turn would be found to be just as thickly inhabited by correspondingly smaller parasites. Our common science, for instance, claims to have discovered that the ordinary house fly is inhabited by fly lice. I propose before I get through with my inquiries, to prove to the scientists that the fly lice also have lice on them; and furthermore, I am going to show these lice on the lice that live on the horse fly, just as clearly as I have snown you the parasite that inhabits Mrs. Warm. I cannot do this with my present instrument, for it is crude and imperfect in many particulars; but I hope within six months at the outside to

INHABITANTS OF OUR BLOOD. The professor was asked to exhibit some human blood. The same lady who had supplied the epidermis kindly volunteered to sacrifice a drop of her vital fluid to the cause of science. The merest quantity of it, almost invisible to the human eye, was placed as be-fore. The spectacle presented was mar-

velously beautiful. It seemed as if all colors and combinations of the kaleid-oscope had been brought into play. White corpuseles as large as hen's eggs floated around in a poel of colorless liquid, alternating with great masses of red and brown coloring matter. As many as seven different kinds of corpuscles were disclosed, where-as the physiologists up to this moment

have taught that there are only two kinds, red and white. When Dr. Hand looked at these fleatwhen IV. Hand looked at these heating bodies of fibrin and fat he turned quickly around to Mrs. W— and said: "Your blood is in a very bad condition. It needs phosphate and iron. The white globules should be round and distinct; they are instead, flat and decreased. You ill needs to be a second to be a seco pressed. You will need to go under a treatment of mild tonics."

"Now," said Professor Coles, "you come to one of the most important uses of my machine. I contend that by a series of studies of the human blood through this powerful magnifier it will be possible to make diagnosis an abso-lute certainty. The physician will be able to ascertain at a glance exactly what his patient is afflicted with, and can apply the requisite cure without a can apply the requisite cure without a moment's delay, watching its effects with unerring precision. As I have said before, the 'Eye' tonight is under low pressure. When it is magnifying its maximum number of diameters you can see in the blood, floating around among the corresponding to the control of the among the corpuscles, just such living ago playing among the scales of Mrs. W—'s epidermis. The blood is the medium of exchange between these tiny travelers. The veins and arteries are the rivers that they swim in and the blood is the water that flows in those

rivers. BRIEF GLIMPSES OF MARS. By this time the planet Mars had reached the fulness of its brilliancy and shone like an immense gem in the east-

isn't absolute. I used to believe what the text books told me. Now I am get-ting ready to revise the text books."
"But how do you keep the 'Eye' fixed on a moving star? By the time you get it focussed on Mars, Mars will have moved thousands of miles out of range.

will it not?"
"I am glad you asked that question.
If the 'Eye' were an ordinary telescope,
yes. But it isn't. It is as nearly like
the human eye in the particular you
mention as crude human mechanism
can be like Divine creation. When you
look at a maying train done the train. look at a moving train, does the train get out of range while you are adjusting the focus, or does your eye move in unison with the train? To be sure, it Well, its that same principle which governs the 'Electric Eye.' But

let us see for ourselves."
In a moment the mechanism was pointed out the Eastern door, properly elevated and nicely focussed.
"Now is your time," exclaimed the
professor. "It is an exceptionally fine professor. "It is an exceptionally fine view of Mars. You can see every detail distinctly."

ALMOST WITHIN REACH. The panorama that unfolded itself bore fewer startling features than any that had proceded. It looked like a landscape such as one would see, standing on a range of hills and looking across a valley three or four miles wide, to the opposite hills. There was a white center, which looked as if it might be water—possibly a lake. On the nearer side of this lake stood a range of hills, their sides and slope dotted in places by dim objects which ooked like towering tropical palms. In the background, another range of hills, some touched at the top by a hills, some touched at the top by a of miles upon miles of wheat forming white, misty substance which might golden rows across these prairies. As have been fog or snow, completed the

ly, forming an electric current; there was a slight sound as of the rattling of a pan, and Professor Coles drew forth from the body of his mechanism a sheet of common white wrapping paper upon which a perfect disc picture of the foregoing scene was printed in black shading. The picture looked like a charcoal drawing of remarkable delicacy, but the surface of the pay perfectly smooth and unruffled.

Another view of Mars was taken, presenting a forest scene of exception-al distinctness, with mountains in the rear. This scene was similarly photographed upon paper which one of the visitors supplied, and upon which each person had first written his name for or Mars was attempted, but by this time the "Eye" had grown weary of the prolonged strain upon its optic nerves and incontinently went to sleep. THE PRINCIPLE OF THE THING. "Upon what principle does this me-chanism work?" Profesor Coles was

"Upon the principles of light linked to electricity. Light is a fast steed, and so is electricity. Yoke the two together, and you have a speedy team."
"But how did you come to think of this?

asked.

"By reason of the thunder storm and the china placque that I told you of a while ago,

"Is Mars inhabited?"
"To the best of my belief it is, and by a race superior in intelligence to our own. Mars has three satellites, each stronger than our moon. Yes, I know school book astronomy says there are only two; but I tell you there are three. I have seen them. Besides, speaking of the Marisians, they get ten or a dozen times as much sunlight as we do. I igure it out that their night is as bright as our brightest day. They must, therefore, be more intelligent than we. Light means brains, always." "But what about the disturbances said to be going on in Mars? Are they real, or are the astronomers dream-

They are real enough. I have reason "Eye" a glimpse of Mars, then in unrivalled brilliancy in the Eastern heavens.

The things about to be related were seen, one after another, by six adult persons who had not previously particular of the best of akes and canals. I haven't been able to identify any human being on Mars, but I can plainly see evidences of man's handiwork, and I believe it will be pos-sible to locate them and find out how they are getting along up there in that sultry climate.

sultry climate."
"What are your plans, professor?"
"Well, they will depend somewhat on circumstances. I am building a workshop, where I shall have the proper room and light and tools. I expect to have some skillful physician make a study of all the germs of disease, in the study of all the germs of disease, in the identification and treatment of which there is a fabulous fertune. Then I propose to publish a book, which is already in manuscript, on 'The Human Body as Seen Through the Electric Eye'. Strange as it may seem, I pro-pose also to store sunlight and let it out on demand. I can do that now, on a small scale. If my experiments sucsmall scale. If my experiments suc-ceed, electricity, as an illuminant, will be outclassed by conserved sunlight, minlon. which will be at once, safer and cheap-er. This sounds to ordinary ears like a fairy tale, I'll admit; but it is the netual fact, based on long and honeful experiments. Heretofore I have been handicapped in every way. Now I have means, friends and renewed health, and a new 'Eye' four times as effectual as the one you have seen, is a probability of the next few months." And after what one had seen, what

MODERN DRAMATIC TUITION.

Loud and angry voices were heard in the room above. A woman's piercing scream smote the nir.

Thump! Thump! Thump!
A woman's heartbreaking sobs broke upon the ears of the horrified listeners.

With one accord they rushed up the stairway and burst open the door of the room from which the sounds proceeded.

A woman with dishevelled hair, torn and dust-covered clothing, and eyes red with weeping stood in the middle of the room.

with weeping stood in the middle of the recon.

A man with coat off, sleeves rolled up, his eyebails rolling in frenzy, and the perspiration streaming down his face confronted the intruders.

"What do you want here?" he demanded.

"We are here in the interests of humanity," sternly answered one of them.

"You are brutally mistreating a woman!"

"Am I." he asked, turning to her,

"No-o," she sobbed, "you are not! Gentlemen, he—he is teaching me how to—to express the—the matural emotions. This is n—is a school of dramatic art."

And the avengers slunk out of the door and went slowly down the stairway.—Chicago Tribune.

A Victim of Rudeness.

"Women are so inconsistent," com-"Women are so inconsistent," complained Chollie.

"What has happened now?" asked the man to whom Chollie is a specimen to be thoughtfully studied.

"I was saying to Miss Kean that I wished I knew of some way in which I could be of use to the world, and she broke right in on my wemawks to tell me that they were making pocketbooks out of monkey skins nowadays. It was pawsitively wude."—Indianapolis Journal.

A SONNET.

Oh, God, say once again: "Let there be Perchance in Heaven thou dost not here thy children stumble in the night-And cry aloud in bitter wrath and woe And curse and pray in vain to win one of far fair stars; or catch the upper

glow

Of the keen dawn that streamed down
from the height
Upon mankind and quickened long ago.
Oh, God, say once again: "Let there
be light."

Let sweet light break upon us from above And on our unsafe path that we may We have thy word of old, we turn to Who giveth hope, and kin. lines and love. Oh, God, say once again: "Let there be light."

WONDERS OF THE OUEEN'S DOMAIN

The Marvelously Fertile Province of Masitoba Described.

BRIEF RECORD OF ITS HISTORY

Not Only Do Its Farmers Raise the Best and Most Abundant Yields of

Special Correspondence of The Tribune. Winnipeg, Manitoba, Sept. 16.—Leaving Brandon eastward, the next place of importance is Portage la Prairie, 77 miles distant. Between these two places, stations succeed one another at intervals of five or eight miles, many of them surrounded by bright and busy towns, and at nearly all are tall and massive elevators. Certainly the Canadian Paritic hay amply provided for the dian Pacific has amply provided for the care and shipment of grain and stock here, as along the entire route, to a These fields of golden grain that we are passing through are among the "beauty spots" of the Dominion, Think

we near Portage la Prairie the country "Now I will 'snap' that 'shot' for you," said the professor; and suiting the action to the word he drew back a springy steel wire, let it go suddenboine River, along which we have been traveling. Portage la Prairie is also located on the Assiniboine River, another city of a day's growth, and the center of a well developed and pros-perous farming region. Its huge ele-vators and flour mills, its busy streets and substantial houses, tell eloquently their own story. It is also one of the principal grain markets in the province, and a junction point of the Manitoba railway, which extends northward 223 miles towards Frince Albert county, and the Lake region. Its close proximity to Lake Manitoba, about twenty-five miles due north, gives the town additional importance as a pleasure resort. This lake is 782 feet above sea level, with an area of 1,900 square miles, and noted for myriads of water fowl and chickens while moose, elk and black-tailed deer are found in the Riding Mountains.

BIG WHEAT YIELDS. The wheat yields in the Portage plains district is turning out phenomenal, for the tales told by the threshers put all estimates of the yield in the shade. One Charles Cuthbert threshed from a field of twenty-one acres 1.193 bushels, or an average of fifty-seven bushels per acre. On the McLaren farm, three miles north westward, the wheat crop surpasses anything ever seen by the writer. It is no exaggeration to say it stands even four and a half feet in height, is as close as it can grow, and the weight of the big heads causes the rank straw to bend over heavily. Two or three binders with four horses abreast were at work on this part of the field, but could not cut a full swath, as the machine "jammed" too often. The use of the sheaf carriers had to be dispensed with, as the sheaves come so fast and heavy that they must be dropped just as quickly as formed, which was surprisingly fast. stacks were half as big again as ordinary ones, and stood very thickly all over the field; the yield will be fifty bushels per acre of choicest wheat, with no sign of smut on it. The reader may imagine the striking contrast of scenery in coming from among the "mighty works of God" in the Selkirk and Rocky

kota, reaching to the North and West apparently without limit. This great widening and tree bordered meadow comprises the valleys of the Red and Assiniboline Rivers that unite at Win-nipeg, which magic city we enter for a four days' solourn after one long prairie ride full of surprises and education.

MANITOBA'S HISTORY.

It may be of interest to our readers to learn something of the early history of Manitoba, its discovery, its development, the causes for building the Canadian Pacific tailway and consequent rapid development of the Domin-ion given in substance from copious memoranda grouped at various interviews with Professor John Macoun (naturalist), and member of the "Geological Survey of Canada," who is said to be one of the best informed men and most reliable authorities to be found concerning the history of the Do-

There are some who maintain that the honor and glory of penetrating this northwest country is due to French explorers about the year 1666, through the lake of the Assiniboines (Winnipeg) to Hudson's Bay, Others affirm that the celebrated La Gerandrye from Montreal was the first explorer who reached the forks of the Red and Assinibolation rivers the research of the Section 1986, and the section of the Section 1986, and the section of the Section 1986, and the section 1986, and the section 1986, and the section 1986, the section 1986, the section 1986, and the section 1986, and the section 1986, and the section 1986, through every state in the Union, and also in every produce in the Dominion, can heartly ended the section 1986, through every state in the Union, and also in every produce in the Dominion, can heartly ended the section 1986, the section siniboline rivers, the present site of Winnipeg, in 1732, and there built a fort which he called Fort Rouge, a name now borne by the most fashion-able part of the city. He was the forerunner of the independent licensed ing homes. fur traders, followed by the great Northwest company of Montreal, who were in turn followed by the English

rival companies for years, which term-inated in a massacre at Red River in 1816, peace was brought about by royal proclamation, commanding cossa-tion of hostilities and the sending of peace commissioners to Red River, the present Winnipeg, when the two com-panies became united and under the part of it known as the Province of Manitoba was given responsible government. For some years, as in the case of all new countries, the people of Canada falled to realize the incatculable value of their acquisition, and the tide of immigration flowed in on the country slowly and fitfully. The construction of railways in the northwestern states banished the dog train, the Red River cart, and the steam boat, and suddenly made the country easy comparatively of access, and a flood of settlers poured into the land culminating in 1881 in a boom unequaled in the northwest. Winnipeg at that time (1870) contained about the steam are rich, owning fine houses and large farm possessions. Napoleon said, "You skin a Russian and you will find a Tartar," but not so with this people.

Flax raising was introduced mainly by the Mennonites, and is becoming a source of great revenue. The yield is equaled in the northwest. Winnipeg at that time (1870) contained about thirty buildings outside of the fort, embracing eight stores, two saloons, two hotels, a mill and a church, and a population of 215 souls. This had increased to 6,500 by 1880, to over 20,000 by 1893, and in 1895 it was 28,000, of which seventy per cent, are Canadians, and the thirty per cent. Scotch and and the thirty per cent, Scotch and

English with scarcely any Irishmen. EARLY FARMING.

Two hundred and twenty-five years ago, the Hudson Bay combination owned all this country embracing millions upon millions of acres of this valuable land, keeping off the white cettler for many years and only dealing with the Indians for their furs and pelts. The first attempt at farming in this province was made in 1811 by the colonists sent out by Lord Selkirk. It proved to be a failure and was not renewed for many years, owing to the extreme hostility of the Hudson Bay

company, who, anxious to keep settlers off their territory, discouraged their off their territory, discouraged their coming by asserting that the land was not fit for cultivation. Sixteen years ago this entire country was over run with buffalos. There were no ranches of either horses or cattle until the summer of 1879. Beyond Winnipeg no attempt had been made to raise grain not even cattle, for the buffalo still reamed the prairies. The settlements at that time did not extend a hundred miles west of Winnipeg. But it was miles west of Winnipeg. But it was discovered that the soil especially in the valley of the Red river, was very

In 1875 the grasshopper cleaned out

fertile.

the whole of Manitoba and not a blade of grass was left. Not even seed Wheat to Be Found Anywhere, but
They Are Also Diversifying Their
Crops and Laying the Foundations

"a Splendid Future.

blade of grass was left. Not even seed wheat could be found in the country and the people became extremely destitute. Therefore, in the spring of 1876, the Canadian government secured a quantity of seed wheat from the mills of Minneapolis and gave it to the formers of Manitoba to re-establish farmers of Manitoba to re-establish themselves with. Not a kernel had ever been sown in the northwest of Mani-toba at this time, but during the next three years such abundant crops of first-class hard wheat had been raised that the attention of not only the government officials, but also of Consul Taylor of Winnipeg, and Jim Hill, of Minneapolis, was aroused to the fact that this section could raise the best wheat in America, and of a kind especially adapted to the use of the milb of St. Paul and Minneapolis. The next move was to build a railroad from St. Paul to Winnines. After securing fi-nancial aid of Sir Denald Smith, Lord Stephens and a Mr. Angus, of Montreal, who backed Jim Hill's project, the road was built and opened for traffic in the spring of 1879. The next step was the attempt by the government to build a trans-continental railroad on all Canadian soft, and its inability to go of with the enterprise through political jealousy, which led to the final organization of the present Canadian Pacific Raffway company to complete the un-dertaking, which was done in 1885 solely through the indemitable energy and perseverance of these men. It is an undeniable fact that this province and even the entire dominion, owes its development, growth, and present pros-perity more to the building of this great "National Highway" than to any other agency, and to the men who early conceived this gigantic plan the country at large owes an incalculable debt of gratitude.

IN THE CENTER. province of Manitoba, is situated in the very center of the American continent, being midway between the Atlantic and Parific oceans on the east and west, and the Arctic ocean and the Gulf of Mexico on the north and south, and contained formerly 116,021 square miles. The southern frontier of the province borders on the United States. province borders on the United States. being the forty-ninth parallel of latt-tude. The desolate territory of Kee-watin lies to the north of the province. sweeping past the western shores of Hudson's Bay to the "Frozen Gecan," and by the Canadian Pacific railway. Winnipeg, its capital, is 1,424 miles from Montreal, its Atlantic scaport, and 1,482 miles from Vancouver on the Pacific Not only have the people of Maritoba connection with the Pacific ocean, and with Eastern Canada and the Atlantic through British territory, and access to the great lakes, but there are also three lines running to the United States boundary joining there our American system of railways, CROPS OF 1895.

The population of Manitoba is now. in round numbers, say 200,000, of whom 25,600 are farmers. Official report says; "The area under wheat in 1835 was 1,140,276 acres; cats, 482,658 acres; barley, 153 829 neres; flax, 82,668; potatoes 16,716; roots, 6,655, a total area under all crops of 1,887,796 acres, an increase of 295,492 acres over 1894. The aggregate 225,492 acres over 1894. The aggregate yield of wheat was 31,775,038 bushels; oats, 22,555,732 bushels; barley, 5,645,035 bushels; flax, 1,281,354 bushels; rye, 81,-082 bushels; pas, 28,229 bushels, a total of 61,356,472 bushels. The yield of potnworld, where it is estimated "a million does was 4.042.562 bushels, an average of 2332 bushels to the acre, and of turnips and mangolds, 2.285,283 bushels, an average of about 337 bushels to the acre, the broad prairie behind us green as a care. The average of barrley was 37 bushels to the acre. bushels per nore. The live stock in the province for 1895 comprised; Horses, 90,000; cattle, 260,000, sheep, 40,000; hogs, 70,000. The total products from forty-two cheese factories was 1,553,192 pounds. The ercamery output for nine-

teen plants was 1.753.582 pounds.

Space will permit me to quote only one of the many published opinions regarding Manitoba, that from J. Jim Hill, president of the Great Northern railway: "I have been in every State of the Union and am familiar with this whole country. The soil in the Red River valley is, to my mind, the richest farming country that I have ever seen. It is not only rich, but it has bright prospects. You will not find it in any other place on the American continent as good as it is in Manitoba, unless it be in a little place on the Wabash, nearly opposite St. Louis, called the Ill-inois bottom. Dakota, being closer to the sage brush country, is more liable the sage brush country, is more hand to visitations from locusts than Mani-toba, and is more easily affected by drought and by dry seasons. It is a prairie country, and the Province of Manitoba is pretty well watered." The

tiers are native born Canadians of English origin. There are many settlers direct from France, Germany and G Britain, as well as colonies of Icelanders, Scandinavians and Mennonites, all whom have been successful in secur

The homestead law is quite similar to the American law. Both the Hud-son's Bay Company and the Canadian Pacific railroad sell the settlers land Hudson's Bay company, who claimed the whole country, "Rupert's Land," under the royal charter given by Charles II, in 1679 to their first governor, Prince Rupert.

After bitter struggles between the latter can be said the latter company furnishes free transportation for all the settlers' families. The Canadian cow boys of to-day take up these ranches and quietly settle upon them in strong contrast to the cowboys of former years, and unlike the roving American cowboy.

RELIGIOUS SECTS. In Southern Manitoba are found set-tlements of Mennonites from Russia, called "Quaker Eaptists." "because of rule of the present Hudson's Bay com-pany tranquility reigned once more and after much weary negotiations, this have no paid ministers. They are exvast territory of millions and millions of acres, was added to the Dominion sacr dly and all people like to deal with of Canada on July 15, 1870, and to that them. They are very industrious, both part of it known as the Province of men and women, and the latter assist men and women, and the latter assist in the fields. They use the latest im-

source of great revenue. The yield is from seventeen to twenty bushels per acre. This industry is only four years old in Manitoba. The fibre was for-merly burned; only the seed was used in making oil, but at Winnipeg is a fac-tory which has proved a success where the fibre is used in the manufacture of linen. Farmers here are not confining themselves to raising wheat alone, but are taking to mixed farming more and more every year throughout the North-

the growing season. It is said both wheat and oats ripened in this section earlier than usual this year. In extreme hot weather and dry winds they "ripen with a jump." The days here are sixteen hours long. With her northern location, her marvelously fertile soil, her long protracted and uninterrupted sunshing and her generous resident. shine and her generous rainfall, it is not surprising that these extraordinary crops of wheat and other grains are grown in Manitoba.

J. E. Richmond. SCIENCE CLIPS.

Cannon was first used by the Moors at Algesias, Spain, in 1343.
False teeth are now made from paper, and are said to last a lifetime.
Cotton cloth, made in India, is mentioned by Herodotus, B. C. 400.
The Greeks had outs B. C. 200, but used them only as food for their horses.
The mative home of wheat is supposed to be the mountain regions of Armenia, Globular lighting set fire to a woman's dress near Angers, in France, during a recent storm, the burns causing her death soon after.
It is not proper to trim the hair that graws in the ear of a horse. Nature intended it to protect the orifice from dust, insects, etc., and sudden atmospheric changes.

Dr. Emil Mobils, the ears of a lorse.

insects, etc., and success
changes.

Dr. Emil Holub, the explorer, has heard
from South Africa that extensive gold
fleids have been found in the Orange Free
State on the bonks of the Vaal river,
which seems to be as rich as those in the
Pand Rand.
Professor Huffin says that persons who have taken an active part in the scientific world should be killed at sixty, as not being flexible enough to yield to the advance of new ideas. He is himself nearly fifty-seven.

PRESCIENCE. Fifty cents per bottle. Sold by Druggists.

The new moon hung in the sky,
The sun wan low in the west,
And my bethrothed and I
In the churchyard paused to rest;
Happy maid and lover,
Dreaming the old dream over,
The light winds wandered by,
And robins chirped from the nest,

Amil lo: in the meadow sweet
Was the grave of a little child.
With the crameling stone at her feet,
And the by running wild,
Tangled try and clover;
Folding it over and over;
Close to my sweetheart's feet
Was the little mound up-piled.

Siricken with nameless fears.
She shrank and clung to me.
And her eyes were filled with tears
For a sorrow I did not see;
Lightly the winds were blowing.
Softly her tears were flowing.
Tears for the unknown years.
And a sorrow that was to be!
—T. B. Aldrich.

66 7 79 Nips

in the bud.

Influenza or Grippy Colds are quite epidemic and need to be "nipped in the bud." Treating a cold in time saves a lot of trouble, as three-quarters of all our sickness comes from taking colddon't take cold, take Seventy-seven, a few doses will prevent and its continued use will "break up" a cold that "hangs on." That means escape from Catarrh, Bronchitis, Pneumonia, all Lung, Chest and Head troubles, A good deal you say for a quarter, but it is true of "77"; the best goods are done up in small parcels, a vial of "77" just fits your vest pocket; handy to carry, always ready for use. Every one has n kind word for Seventy-seven, Dr. Humphreys' precious cure for Colds, frippe, Influenza, Catarrh, Coughs Sore Thront.

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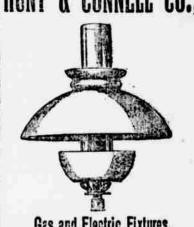
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